

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

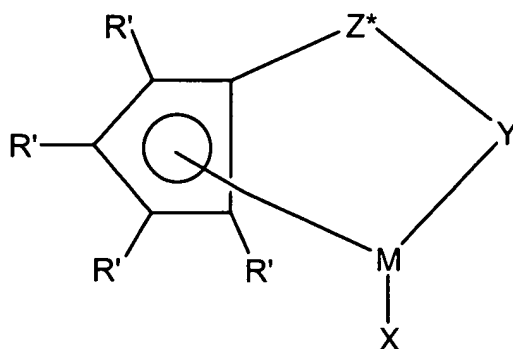
1. (Currently amended) A supported catalyst system suitable for the polymerisation of olefins comprising
 - (a) a transition metal compound,
 - (b) a non-aluminoxane activator, and
 - (c) a support material comprising an inorganic metal oxide, inorganic metal halide or polymeric material or mixtures thereof~~characterised in that~~ wherein the support material has been pretreated with an SO₄ containing compound.
2. (Original) A supported catalyst system according to claim 1 wherein the support material is silica.
3. (Currently amended) A supported catalyst system according to ~~either of the preceding claims~~ claim 1 or 2 wherein the transition metal compound is a metallocene.
4. (Currently amended) A supported catalyst system according to claim 3 wherein the metallocene has the formula:



wherein Cp is a single cyclopentadienyl or substituted cyclopentadienyl group optionally covalently bonded to M through a substituent, M is a Group VIA metal bound in a η^5 bonding mode to the cyclopentadienyl or substituted cyclopentadienyl group, X each occurrence is hydride or a moiety selected from the group consisting of halo, alkyl,

aryl, aryloxy, alkoxy, alkoxyalkyl, amidoalkyl, and siloxyalkyl **[[etc.]]** having up to 20 non-hydrogen atoms and neutral Lewis base ligands having up to 20 non-hydrogen atoms or optionally one X together with Cp forms a metallocycle with M and n is dependent upon the valency of the metal.

5. (Currently amended) A supported catalyst system according to claim 3 wherein the metallocene is represented by the general formula:



wherein:**[[-]]**

R' each occurrence is independently selected from hydrogen, hydrocarbyl, silyl, germyl, halo, cyano, and combinations thereof, said R' having up to 20 nonhydrogen atoms, and optionally, two R' groups (where R' is not hydrogen, halo or cyano) together form a divalent derivative thereof connected to adjacent positions of the cyclopentadienyl ring to form a fused ring structure;

X is a neutral in a η^4 bonded diene group having up to 30 non-hydrogen atoms, which forms a π -complex with M;

Y is -O-, -S-, -NR^{*}-, -PR^{*}-,

M is titanium or zirconium in the + 2 formal oxidation state;

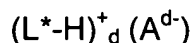
Z* is SiR*₂, CR*₂, ~~SiR*₂SiR*₂~~ SiR*₂SiR*₂, CR*₂CR*₂, CR*=CR*, ~~CR*₂SiR*₂~~

CR*₂SiR*₂, or GeR*₂, wherein:

R* each occurrence is independently hydrogen, or a member selected from hydrocarbyl, silyl, halogenated alkyl, halogenated aryl, and combinations thereof, said

R* having up to 10 non-hydrogen atoms, and optionally, two R* groups from Z* (when R* is not hydrogen), or an R* group from Z* and an R* group from Y form a ring system.

6. (Currently amended) A supported catalyst system according to ~~any of the preceeding claims~~ claim 1 or 2 wherein the activator ~~may be~~ is represented by the formula:



wherein

L* is a neutral Lewis base

(L*-H)⁺_d is a Bronsted acid

A^{d-} is a non-coordinating compatible anion of a Group IIIA metal or metalloid having a charge of d⁻, and

d is an integer from 1 to 3.

7. (Original) A supported catalyst composition according to claim 6 wherein the anion comprises a boron metal.

8. (Original) A supported catalyst system according to claim 6 wherein the activator comprises a cation and an anion wherein the anion has at least one substituent comprising a moiety having an active hydrogen.

9. (Currently amended) A supported catalyst system according to ~~any of the preceding claims~~ claim 1 wherein the SO₄ containing compound is a transition metal sulphate.

10. (Original) A supported catalyst system according to claim 9 wherein the transition metal sulphate is a sulphate of iron or copper.

11. (Currently amended) A supported catalyst system according to ~~claims~~ claim 1 ~~[[to 8]]~~ wherein the ~~[[the]]~~ SO₄ containing compound is ammonium sulphate or sulphuric acid.

12. (Currently amended) A process for the polymerisation of olefin monomers selected from (a) ethylene, (b) propylene (c) mixtures of ethylene and propylene and (d) mixtures of (a), (b) or (c) with one or more other alpha-olefins, said process performed under polymerisation conditions in the presence of a supported catalyst system according to ~~any of the preceding claims~~ claim 1.

13. (Currently amended) A process for the polymerisation of ethylene or the copolymerisation of ethylene and ~~α-olefins~~ alpha-olefins having from 3 to 10 carbon atoms, said process performed under polymerisation conditions in the ~~present~~ presence of a supported catalyst system according to ~~claims~~ claim 1 ~~[[to 11]]~~.

14. (Currently amended) A process according to ~~claims~~ claim 12 ~~[[or 13]]~~ wherein the alpha-olefins are 1-butene, 1-hexene, 4-methyl-1-pentene and 1-octene.

15. (Currently amended) A process according to ~~claims~~ claim 12 ~~[[to 14]]~~ which is carried out in the gas phase.